

BIBLIOGRAPHY

C. FITZHUGH TALMAN, in charge of Library

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Calvin, Ross.

Sky determines; an interpretation of the Southwest. New York. The Macmillan co. 1934. 354 p. front., plates. 20½ cm. Bibliography: p. 343-346.

Cornish, Vaughan.

Ocean waves and kindred geophysical phenomena, with photographs by the author and additional notes by Harold Jeffreys. Cambridge [Eng.] The University press. 1934. 163 p. front., 1 illus., plates, diagr. 22 cm. Bibliography: p. xv.

Piccard, August.

Au-dessus des nuages; orné de 32 pages en héliogravure. Paris. B. Grasset [1933.] 269 p., incl. illus., facsim., front., plates, ports. 19½ cm. At head of title: Auguste Piccard . . . on cover: 17e édition.

Poland. Institut météorologique.

Etudes météorologiques et hydrographiques . . . Varsovie. 1924-1929. 28 cm. Fasc. 1-6.

Potsdam. Meteorologisch-magnetisches Observatorium.

Tabellen der Intensität der Sonnenstrahlung in Mittel-Europa. H. 1-12. 1930-1931. Potsdam. 1930-1931. v. p. 33×20½ cm.

Salomon-Calvi, Wilhelm.

Die permokarbonischen Eiszeiten. Mit 8 Figuren im Text. Leipzig. Akademische Verlagsgesellschaft m. b. h. 1933. 156 p. maps. 23½ cm.

Schubart, Ludwig.

Praktische Orkankunde, mit Anweisungen zum Manövriren in Stürmen. Mit 111 Abbildungen im Text. Berlin. E. S. Mittler & Sohn. 1934. 143 p. incl. tables, diagrs., fold. maps. 26½ cm. "Literaturverzeichnis": p. [141]-143.

SOLAR OBSERVATIONS

SOLAR AND SKY RADIATION MEASUREMENTS DURING AUGUST 1934

By IRVING F. HAND, Assistant in Solar Radiation Investigations

For a description of instruments employed and their exposures, the reader is referred to the January 1932 REVIEW, page 26.

Table 1 shows that solar radiation intensities averaged above normal for August at Washington, close to normal at Madison, and below normal at Lincoln.

Table 2 shows an excess in the total solar and sky radiation received on a horizontal surface at New York, Fresno, Pittsburgh, and New Orleans, and a deficiency at all other stations for which normals have been computed.

Polar continental air masses were indicated on all days when turbidity measurements were made, as shown in table 3.

Polarization measurements obtained at Washington on 4 days give a mean of 58 percent with a maximum of 60 percent on the 27th. At Madison, measurements on 11 days give a mean of 47 percent with a maximum of 58 percent on the 28th. The values for Washington are above the August normals, while those for Madison are below normal.

TABLE 1.—Solar radiation intensities during August 1934

[Gram-calories per minute per square centimeter of normal surface]

WASHINGTON, D. C.

| Date | Sun's zenith distance | | | | | | | | | | Local mean solar time |
|------------|-----------------------|----------|-------|-------|-------|------|--------|-------|-------|-------|-----------------------|
| | 8 a.m. | 78.7° | 75.7° | 70.7° | 60.0° | 0.0° | 60.0° | 70.7° | 75.7° | 78.7° | |
| | 75th mer. time | Air mass | | | | | | | | | |
| | e | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | e |
| Aug. 1 | mm | cal | cal | cal | cal | cal | cal | cal | cal | mm | |
| Aug. 6 | 11.38 | 0.77 | 0.93 | 1.16 | 1.39 | | | | | 8.81 | |
| Aug. 20 | 7.57 | | | | | | | | | 7.87 | |
| Aug. 22 | 15.66 | | | | | | | | | 10.21 | |
| Aug. 27 | 14.10 | 0.42 | .54 | .70 | | | | | | 14.60 | |
| Aug. 29 | 12.68 | | | | | | | | | 8.48 | |
| Aug. 30 | 10.59 | | | | | | | | | 8.81 | |
| Aug. 31 | 6.76 | | | | | | | | | 6.27 | |
| Means | 9.14 | (.42) | .69 | .82 | 1.10 | 1.38 | (1.18) | | | 6.27 | |
| Departures | | -.21 | ±.00 | +.05 | +.16 | +.14 | +.15 | | | | |

MADISON, WIS.

| | | | | | | | | | | | |
|------------|-------|--|------|------|------|-------------|------|--|--|--|-------|
| Aug. 1 | 11.38 | | 0.64 | 0.76 | 0.91 | 1.26 | | | | | 12.24 |
| Aug. 2 | 19.23 | | | | | | | | | | 14.10 |
| Aug. 3 | 13.61 | | .54 | .72 | .88 | 1.25 | | | | | 13.13 |
| Aug. 4 | 11.81 | | .59 | .80 | .98 | 1.19 | | | | | 13.61 |
| Aug. 9 | 18.59 | | | | | | | | | | 15.65 |
| Aug. 13 | 16.79 | | | | | | | | | | 12.68 |
| Aug. 18 | 16.20 | | | | | | | | | | 15.11 |
| Aug. 20 | 6.76 | | | | | | | | | | 5.79 |
| Aug. 21 | 9.14 | | | | | | | | | | 11.81 |
| Aug. 22 | 9.11 | | | | | | | | | | 8.81 |
| Aug. 24 | 6.27 | | | | | | | | | | 4.95 |
| Aug. 25 | 5.56 | | | | | | | | | | 6.27 |
| Aug. 28 | 7.87 | | | | | | | | | | 4.95 |
| Aug. 29 | 7.57 | | | | | | | | | | 6.50 |
| Means | | | .59 | .88 | 1.03 | 1.34 (1.22) | | | | | |
| Departures | | | -.23 | -.05 | -.06 | +.02 | +.13 | | | | |

LINCOLN, NEBR.

| | | | | | | | | | | | |
|------------|-------|------|------|------|------|------|------|------|------|-------|--|
| Aug. 8 | 11.38 | | 1.00 | 1.18 | 1.38 | 1.09 | 0.89 | 0.74 | 0.61 | 9.83 | |
| Aug. 17 | 18.59 | | 0.70 | .78 | 1.06 | 1.27 | .94 | .70 | .55 | 18.59 | |
| Aug. 18 | 17.96 | | | | | | | | | 14.60 | |
| Aug. 21 | 12.24 | | | | | | | | | 11.38 | |
| Aug. 23 | 13.13 | | | | | | | | | 12.24 | |
| Aug. 25 | 5.16 | 0.68 | .78 | .90 | .98 | 1.30 | .80 | .44 | .34 | 5.56 | |
| Aug. 26 | 5.77 | | .79 | .90 | 1.04 | 1.19 | 1.39 | | | 7.57 | |
| Aug. 27 | 8.18 | | | | | | | | | 7.76 | |
| Aug. 28 | 7.57 | | .83 | .96 | 1.10 | 1.27 | 1.47 | 1.24 | 1.04 | 6.02 | |
| Aug. 31 | 13.61 | .57 | .66 | | | | | | | 16.20 | |
| Means | | | .72 | .80 | .92 | 1.09 | 1.28 | 1.02 | .85 | .58 | |
| Departures | | | +.03 | +.01 | +.01 | ±.09 | -.03 | -.05 | -.04 | -.10 | |

BLUE HILL METEOROLOGICAL OBSERVATORY OF HARVARD UNIVERSITY

| | | | | | | | | | | |
|---------|------|--|--|------|------|------|------|------|-----|------|
| Aug. 1 | 13.6 | | | 0.83 | 1.16 | 0.94 | 0.68 | 0.54 | | 11.8 |
| Aug. 2 | 12.7 | | | 1.02 | 1.29 | | | | | 12.2 |
| Aug. 3 | 15.6 | | | | | | | | | 15.1 |
| Aug. 4 | 13.2 | | | | | | | | | 9.5 |
| Aug. 5 | 10.6 | | | | | | | | | 8.4 |
| Aug. 6 | 7.6 | | | 1.09 | 1.22 | 1.35 | | | | 6.0 |
| Aug. 7 | 10.2 | | | | | | | | | 10.6 |
| Aug. 8 | 13.6 | | | | | | | | | 15.1 |
| Aug. 11 | 18.0 | | | | | | | | | 12.7 |
| Aug. 17 | 10.2 | | | | | | | | | 10.6 |
| Aug. 18 | 12.7 | | | | | | | | | 13.8 |
| Aug. 21 | 6.3 | | | | | | | | | 6.0 |
| Aug. 22 | 11.1 | | | | | | | | | 11.9 |
| Aug. 30 | 7.1 | | | | | | | | | 7.1 |
| Aug. 31 | | | | | | | | | | |
| Means | | | | 1.09 | 1.04 | 1.25 | .98 | .85 | .60 | .72 |